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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/424,300 03/13/00 KANEKO

Y 056361

EXAMINER

IM22/0504

SUGHRUE MION ZINN
MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON DC 20037-3213

PIZIALI, A

ART UNIT

PAPER NUMBER

1775

DATE MAILED:

05/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/424,300

Applicant(s)

KANEKO ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Examiner has considered all references submitted by applicant and they have been cited on form PTO-892. No copies of these references have been furnished with this office action.

Specification

3. Reference to a claim of the disclosure, in the specification, is improper. Page 4, lines 13, 15 and 17-35, and page 5, lines 1-32 reference claims of the disclosure. Suggestion is to remove the references.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,888,321 to Kazama.

Kazama discloses a steel wire having a diameter ranging from 0.1 to 0.4 mm (column 6, lines 20-33) obtained by subjecting a high-carbon steel wire material having a carbon content ranging from 0.80 to 0.89 in weight to heat treatment and wire drawing (column 3, lines 35-50). Kazama discloses that the upper limit of the tensile strength of the steel wire satisfies the formula $TS \geq -1960D + 4214$ (column 4, lines 35-40) where TS is the tensile strength in N/mm^2 and D is the diameter of the steel wire in mm. When $D=0.3mm$ formula $TS \geq -1960D + 4214$ results in a $TS \geq 3626 N/mm^2$, formula $TS \geq 2250-1450\log D$ results in a $TS \geq 3008 N/mm^2$, and formula $TS \geq 2750-1450\log D$ results in a $TS \geq 3508 N/mm^2$. Kazama satisfies the formula $TS \geq 2250-1450\log D$ and the formula $TS \geq 2750-1450\log D$ when $D=0.3mm$.

Kazama uses drawing dies ranging from 8-10 degrees with a bearing length of 0.3D (column 4, lines 6-18). Kazama also uses a final die area reduction of 1.2 to 3.9 % and immediately after passing through the final die the steel wire temperature is maintained below $150^\circ C$ (column 4, lines 6-18). Kazama uses a torsion test in which tension is lightly applied while the steel wire is twisted in one direction and then twisted in the reverse direction (column 7, lines 43-58). Kazama discloses that the steel wire possess not only a high tensile strength but also a high toughness along with good twisting efficiency and good fatigue resistance (column 4, lines 53-61). Kazama does not mention a breaking torsion value or a repeated torsion value, with or without 10% of the total volume removed from the surface, however, due to the substantially identical steel wire composition and manufacturing method The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess

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characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

Allowable Subject Matter

6. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Japanese Patent No. 7-305285 to Takayuki is the best art disclosing a method of manufacturing a high-carbon steel wire with a diameter of 0.2 to 0.6mm with heat treatment and characterized in that the step of drawing is carried out according to steps 1-3 and 5 of applicants disclosure in claim 5. Takayuki also discloses the strain at the final die to be 4.0. It would not have been obvious to one having ordinary skill in the art at the time the invention was made to use a reduction per die set from 4% to $(-8.3\epsilon + 40.6)$ for the final die or to thereafter use a bending operation with tension applied to the steel wire drawn through the final die.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5665.

atp

atp

April 30, 2001

Deborah Jones
DEBORAH JONES
SUPERVISORY PATENT EXAMINER